

**Derivatives of Thiazole as Potential Drugs II. Diploma Thesis, Department of Pharmaceutical Chemistry and Drug Control, Charles University in Prague, Faculty of Pharmacy in Hradec Králové, 2010**

**Abstract**

Within this diploma thesis, preexisting (*E*)-2-(1-pyrazin-2-yl-ethylidene)hydrazonocarbothioamides and new (*E*)-2-[1-(5-benzylpyrazin-2-yl)-ethylidene]hydrazonocarbothioamide were prepared. Reaction of substituted acetylpyrazines with thiosemicarbazide proceeded according the procedure reported previously. Antimicrobial activity of prepared substances was tested against eight bacteria by the microdilution broth method with utilization bacitracin and neomycin as positive controls. Promising inhibition effect against *Staphylococcus epidermidis* was found with (*E*)-2-[1-(5-*tert*-butylpyrazin-2-yl)ethylidene]-hydrazonocarbothioamide.

Next, reaction of the prepared thiosemicarbazones with maleinanhidrid was studied. In this reaction no identifiable compounds were prepared.

The final experiments were aimed at preparing derivatives of 4-phenyl-2-[2-(1-pyrazin-2-yl)ethylidene]hydrazinylthiazole by the reaction of thiosemicarbazones with phenacylbromide. It was found that the cyclization wasn't completed, only addition of phenacylbromide on sulfur of thiosemicarbazone proceeded. Through this reaction three new compounds were prepared and characterized by their melting points and <sup>1</sup>H-NMR data.